

Reply to the letter to the editor

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We thank Dr. Wiwanitkit for his interest in our paper [1] and note his concern regarding whether the Lintula score is user friendly in clinical work and whether the use of the Lintula score may lead to an increased rate of negative appendectomies.

We have found this score as user friendly and comprehensible to the physician in our emergency department and easy to apply. This score comprises of nine clearly defined medical history and clinical finding variables. Some variables (intensity of pain, pain in the right lower abdominal quadrant, fever, guarding, rebound tenderness, bowel sounds) may change during the repeated examination while some variables (gender, relocation of pain, vomiting) remain constant. Each nine variable is given a numerical value, and the sum of these values can be used to predict the likelihood of acute appendicitis. In contrast to other scores, no laboratory test is included in this score. However, clinician should take in account all available information, and in clinical work, some laboratory test results are usually combined with the Lintula score rating to support the diagnosis.

The lower sensitivity (the percentage of patients with a score of 21/32 or more in the appendicitis group) means higher false negative and not higher false positive

rate, as Dr. Wiwanitkit has got it. We apologised for the confusion. Lower sensitivity is related to the fact that many patients with acute appendicitis have only mild symptoms during the initial phase of the disease. It is known that the diagnosis of appendicitis may not become clear in minority of patients until some hours of observation, or even days, after the onset of symptoms, and a significant delay often ensues before an accurate diagnosis is established. Therefore, repeated application of the score should be integrated into the diagnostic process. A follow-up is recommended in patients with the Lintula score between 15/32 and 21/32. Since the presence of abdominal pain in the right lower abdominal quadrant, rebound and guarding are indicative of appendicitis, the patients with these findings are recommended to be observed even with the score of 15 or less.

In conclusion, the Lintula score should be used as a diagnostic aid, but it cannot supplant careful clinical judgement. It may well be that for one cut-off point, certain criteria are fulfilled, but for others they are not. Therefore, the results of all scoring systems depend on the selection of the cut-off point.

Conflicts of interest None.

Reference

1. Lintula H, Kokki H, Pulkkinen J, Kettunen R, Gröhn O, Eskelinen M (2010) Diagnostic score in acute appendicitis. Validation of a diagnostic score (Lintula score) for adults with suspected appendicitis. *Langenbecks Arch Surg* 395(5):495–500

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